

Species Diversity, 2002, 7, 165–172

Review of the Stilt Bug Genus *Yemmatropis* (Insecta: Hemiptera: Heteroptera: Berytidae), with the Description of a New Species from Viet Nam

Thomas J. Henry

*Systematic Entomology Laboratory,
Plant Sciences Institute, Agricultural Research Service,
United States Department of Agriculture
c/o National Museum of Natural History,
Washington, D.C. 20560, U.S.A.
E-mail: thenry@sel.barc.usda.gov*

The Asian stilt bug genus *Yemmatropis* Hsiao is reviewed and the type species, *Y. dispar* (Hsiao, 1974), and the new species, *Y. erectus*, are described. An adult habitus illustration of *Y. erectus*, scanning electron micrographs of selected structures and male parameres of both species, and a key are provided to assist in identification.

Key Words: Hemiptera, Berytidae, *Yemmatropis*, review, new species, Viet Nam

Hsiao (1977) established the subgenus *Yemmatropis* in the genus *Metatropis* for *Metatropis dispar* Hsiao, 1974, a species he described from China. Štusák (1989) reevaluated *Metatropis* and gave *Yemmatropis* generic status based primarily on the distinctive ostiolar structures. Henry (1997a) redescribed *Yemmatropis* and considered the synapomorphic woolly or tomentose pubescence on the head and thorax to support its placement in the subfamily Berytinae. Henry (1997a) also commented that while the type species *M. dispar* has a short, reclining spine on the scutellum, he had studied an undescribed species from Viet Nam possessing a long, erect scutellar spine, an observation that reflects how plastic scutellar structures in this genus may be.

In this paper, I review the genus *Yemmatropis*, redescribe *Y. dispar*, and describe the new species *Y. erectus* from Viet Nam. An adult dorsal habitus of *Y. erectus*, illustrations of the parameres and scanning electron micrographs of selected structures of both species, and a key are provided to help distinguish *M. dispar* and *M. erectus*.

Acronyms for institutions cited in this paper are BPBM (Bernice Pauahi Bishop Museum, Honolulu, Hawaii) and USNM ([United States] National Museum of Natural History, Smithsonian Institution, Washington, D.C.).

Yemmatropis Hsiao, 1977

Metatropis (*Yemmatropis*) Hsiao, 1977: 285 (n. subg.). Type species: *Metatropis dispar* Hsiao, 1974, by original designation.

Yemmatropis: Štusák 1989: 119 (n. status); Henry 1997a: 43 (description); 1997b: 13

(note); Henry and Froeschner 1998: 11 (catalog).

Diagnosis. *Yemmatropis* can be distinguished from all other berytid genera by the dense, narrow bands of white woolly or tomentose pubescence on the head and pronotum and the lack of punctures on the dorsal and ventral surfaces of the abdomen. It shares with *Apoplymus* Fieber, *Berytoplymus* Štusák, *Hubertiella* Kirkaldy, and *Paraberytus* Štusák an extended ostiolar scent channel, brown-streaked hemelytra, mats and rows of woolly setae on the head and pronotum, and the circular glaucous patch encircled by tomentose setae above the mesoacetabular cleft.

Henry (1997a) provided an identification key to the stilt bug genera of the world, which included *Yemmatropis*.

Key to the Species of *Yemmatropis*

1. Clypeus largely pale brown, narrowly darker brown at apex; band of woolly setae on side of head interrupted along posterior margin of eye between ocellus and lateral line (Fig. 1); scutellar spine short, reclining (Fig. 2).....*Y. dispar* (Hsiao)
- Clypeus largely black, pale brown at base only; band of woolly setae on side of head continuous along posterior margin of eye from ocellus to lateral line (Fig. 6); scutellar spine long, erect (Fig. 7).....*Y. erectus* n. sp.

Yemmatropis dispar (Hsiao, 1974)

(Figs 1–4, 10)

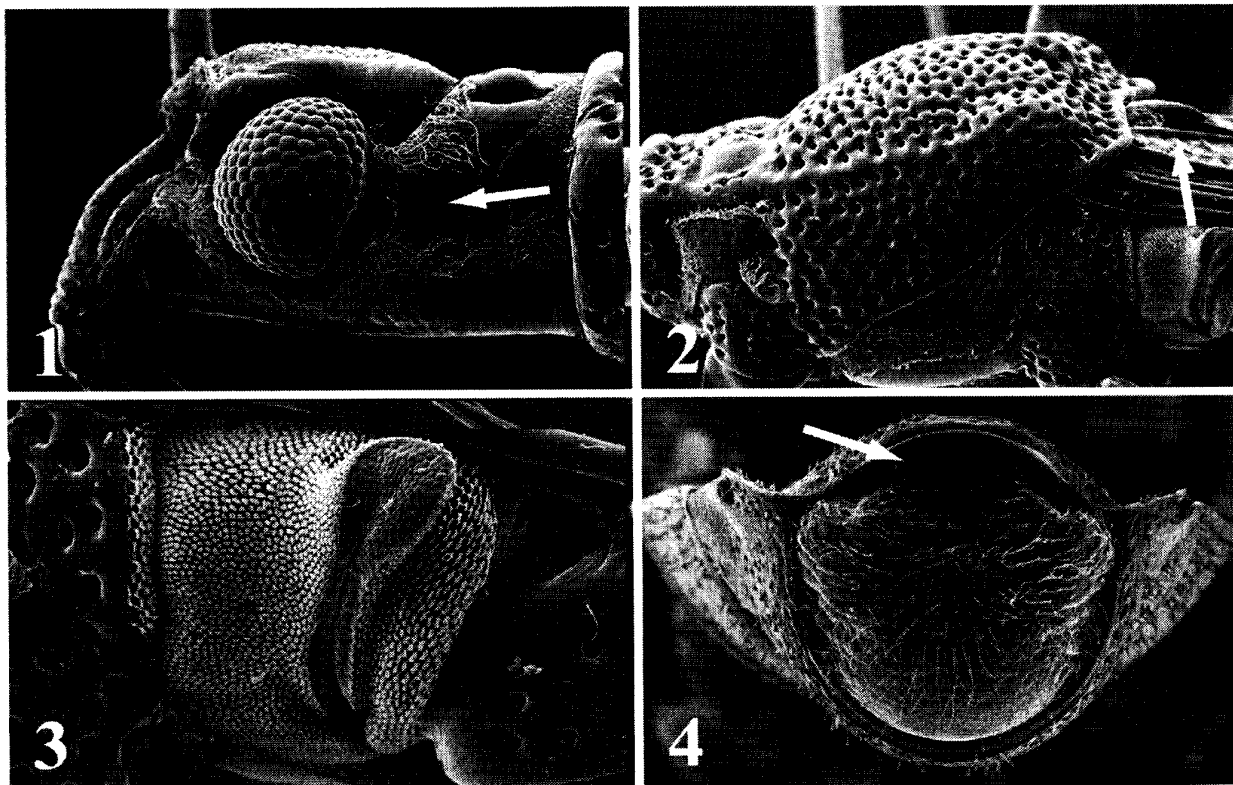
Metatropis dispar Hsiao, 1974: 60 (n. sp.).

Metatropis (*Yemmatropis*) *dispar*: Hsiao 1977: 285 (diagnosis, n. subg.); Ren 1988: 114 (distribution).

Yemmatropis dispar: Štusák 1989: 119 (distribution, note); Henry 1997a: 43 (list); Henry and Froeschner 1998: 12 (catalog).

Diagnosis. *Yemmatropis dispar* is distinguished from *Y. erectus* by the largely pale brown clypeus with only the apex brown, the incomplete woolly band behind the eye (Fig. 1), the short, prostrate scutellar spine (Fig. 2), and the smaller, less distinct, brown spots on the femora and antennal segment I.

Description. *Male* (n=3). Length 7.20–7.36 mm, width across hemelytra 1.02–1.08 mm. General coloration pale brown, with ventral surfaces of head and thorax black. Head: length 0.96–1.00 mm, width 0.61–0.62 mm, vertex 0.33–0.34 mm; pale brown dorsally including basal area, black on ventral half from midline of eye including lorum, and dark brown on apex of clypeus or tylus; narrow bands of woolly setae extending from base of head to middle of eye around ventral margin of eye to lorum (covering dorsal 1/2 of lorum), from ocellus along suture of posterior lobe to eye (see arrow, Fig. 1), and across anterior margin of frons between antennal bases. Rostrum: length 2.60–2.67 mm, extending just beyond metacoxae to abdominal segment II. Antenna: segment I, length 5.00–5.31 mm; II, 2.37–2.43 mm; III 3.52



Figs 1-4. Scanning electron micrographs of *Yemmatropis dispar* (Hsiao, 1974). 1, head, lateral aspect, arrow indicating incomplete woolly band (80.0 \times); 2, pronotum, lateral aspect, arrow indicating short, reclining scutellar spine (30.7 \times); 3, ostiolar scent channel and evaporative area (142.4 \times); 4, male genital capsule, caudal aspect, arrow indicating position of parameres (91.4 \times).

mm; IV, 0.93–0.96 mm; segments I–III pale brown, segment I sparsely and finely brown spotted; segment IV fusiform, black, apical 1/3 pale yellow. Pronotum: length 1.18–1.28 mm, basal width 0.85–0.88 mm; deeply and uniformly punctate except for impunctate calli; pale brown except for black quadrate area above and anterior to proacetabula. Scutellar spine (Fig. 2): short, prostrate, length 0.12–0.18 mm. Hemelytron: pale brown, weakly tinged and streaked with darker brown. Ventral surface: abdomen pale brown except for shiny black, grooved segment II; largely glabrous except for band of pale or whitish woolly setae along rostral groove and posterior and lateral margins of segment II; thoracic area shiny black, with narrow bands of woolly setae bordering rostral groove and margins of pronotum. Ostiolar area (Fig. 3): evaporative surface dark gray, scent channel black; aerial part of spout pale yellow. Legs: pale brown; femora with numerous fine, dark-brown spots, clavate apices darker brown; tibiae pale brown, with scattered fine dark-brown spots; tarsi dark brown, claws black. Femoral lengths: pro- 3.20–3.26 mm; meso- 3.52–3.65 mm; meta- 5.31–5.57 mm. Tibial lengths: pro- 3.58–3.84 mm; meso- 3.90 mm; meta- 7.36–7.42 mm. Genital capsule (Fig. 4): V-shaped dorsal notch narrow, ca. 0.07 mm across base. Paramere (Fig. 10): fingerlike, apical half relatively slender (compare Fig. 11).

Female (n=10). Length 8.00–8.79 mm, width across hemelytra 1.22–1.25 mm.

Head: length 0.95–0.98 mm, width 0.66–0.69 mm, vertex 0.36–0.40 mm. Rostrum: length 2.75–2.88 mm. Antenna: segment I, length 4.93–5.84 mm; II, 2.24–2.64 mm; III, 3.33–3.92 mm; IV, 0.93–1.00 mm. Pronotum: length 1.38–1.43 mm, basal width 0.93–0.95 mm. Scutellar spine: length 0.16–0.18 mm. Femoral lengths: pro- 3.14–3.68 mm; meso- 3.64–4.24 mm; meta- 5.57–6.40 mm. Tibial lengths: pro- 3.65–4.24 mm; meso- 4.03–4.64 mm; meta- 7.49–8.24 mm. Similar to male in color and pubescence.

Distribution. China (Xizang and Yunnan), Myanmar (previously Burma), Nepal, and Thailand (Ren 1988; Štusák 1989; Henry and Froeschner 1998). Malaysia and Viet Nam from specimen data listed below represent new country records.

Host. Unknown.

Specimens examined. MALAYSIA: 1♀, Sabah, 14 km W Kundasang, el. 1450 m, 13 Aug. 1983, G. P. Hevel & W. E. Steiner (USNM). THAILAND: 2♂♂, 11♀♀, Chiang Mai: Doi Suthep, 1278 m, III-29-V-4-1958, T. C. Maa (BPBM; 1♀ USNM); 1♂, 4♀♀, Chiang Mai: Doi Pui, 1360 m, May 2, 1958, T. C. Maa (BPBM; 1♂, 1♀ USNM). VIET NAM: 1♂, 6 km SW Dala, 1550 m, 11.IX.1960, J. L. Gressitt (BPBM).

***Yemmatropis erectus* Henry, new species**
(Figs 5–9, 11)

Yemmatropis n. sp.: Henry 1997a: 43 (list, note).

Diagnosis. *Yemmatropis erectus* is distinguished from *Y. dispar* by the largely fuscous or black clypeus with only the base paler brown, the complete woolly band behind the eye (Fig. 6), the long, erect scutellar spine (Fig. 7), and the larger, often coalescing, dark-brown spots on the femora and antennal segment I.

Description. *Male* (n=5). Length 6.34–6.67 mm, width across hemelytra 0.85–0.86 mm. General coloration pale brown with ventral surfaces of head and thorax black. Head: length 0.74–0.77 mm, width 0.53–0.54 mm, vertex 0.32–0.34 mm; pale brown dorsally, black ventrally from dorsal edge of eye including all of clypeus (except pale brown base) and lorum, and black around base behind ocelli; narrow bands of woolly setae extending from base of head to middle of eye around ventral margin of eye to lorum (and covering most of lorum), from ocellus along suture of posterior lobe to connect lateral band (see arrow, Fig. 6), and across anterior margin of frons between antennal bases. Rostrum: length 2.25–2.40 mm, extending beyond metacoxae to base of abdominal segment III. Antenna: segment I, length 5.76–5.89 mm; II, 2.62–3.20 mm; III, 3.46–3.52 mm; IV, 1.04–1.12 mm; segments I–III pale brown to brown, segment I with numerous distinct, dark brown spots; segment IV fusiform black, apical 1/5 pale yellow. Pronotum: length 1.00–1.06 mm, basal width 0.65–0.70 mm; deeply punctate except for impunctate calli, pale brown except for black quadrate area above and anterior to proacetabula. Scutellar spine (Fig. 7): long, erect; length 0.46–0.52 mm. Hemelytron: pale brown, weakly tinged and streaked with darker brown. Ventral surface: abdomen pale brown except for shiny black, grooved segment II, largely glabrous except for narrow band of woolly setae along rostral groove and posterior and lateral margins; thoracic area shiny black, with narrow bands of woolly setae bordering rostral groove and margins of pronotum. Ostiolar area (Fig. 8): evaporative surface dark gray, scent channel black, aerial part of spout pale yellow. Legs: pale brown; femora with numerous

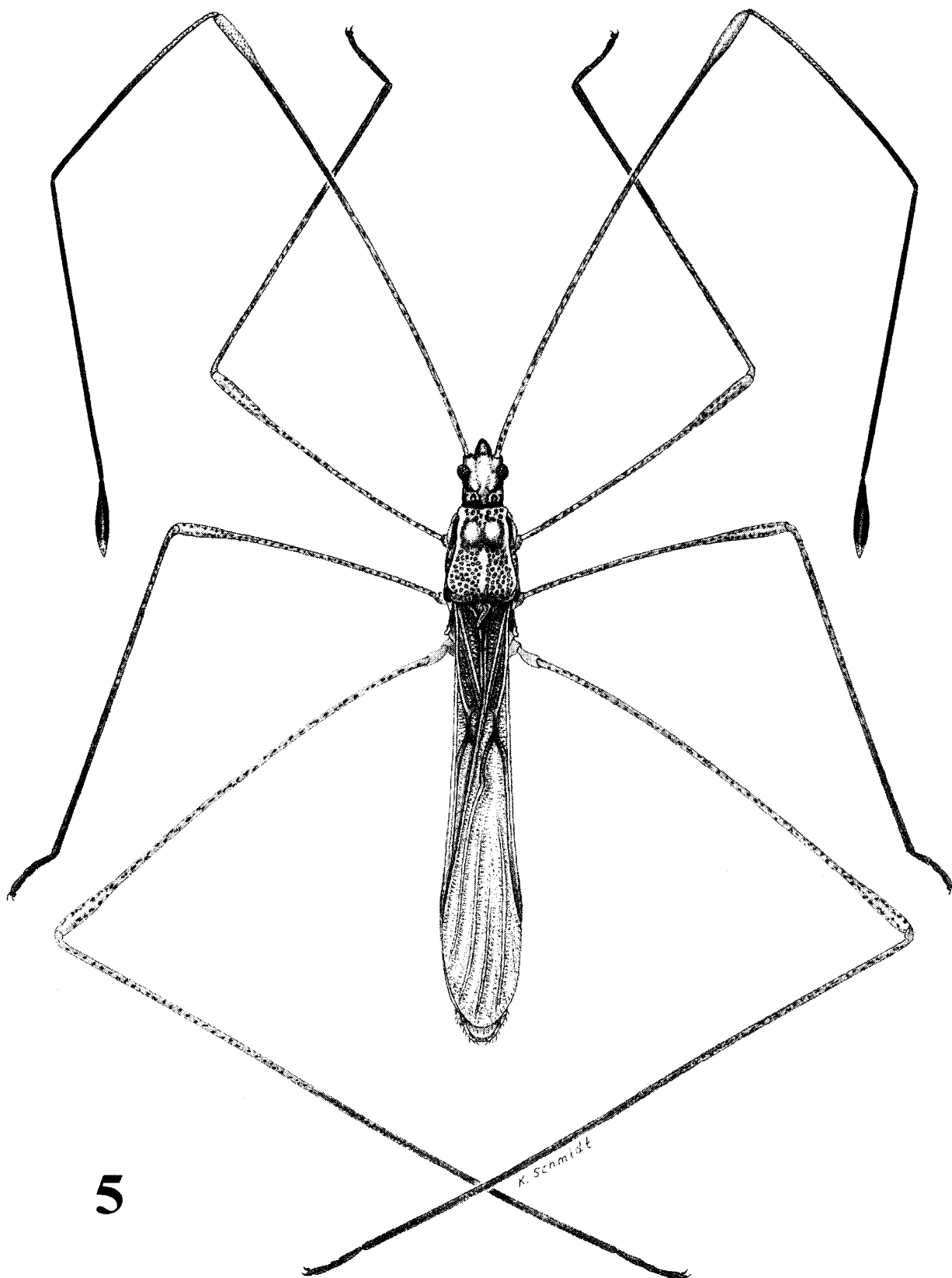
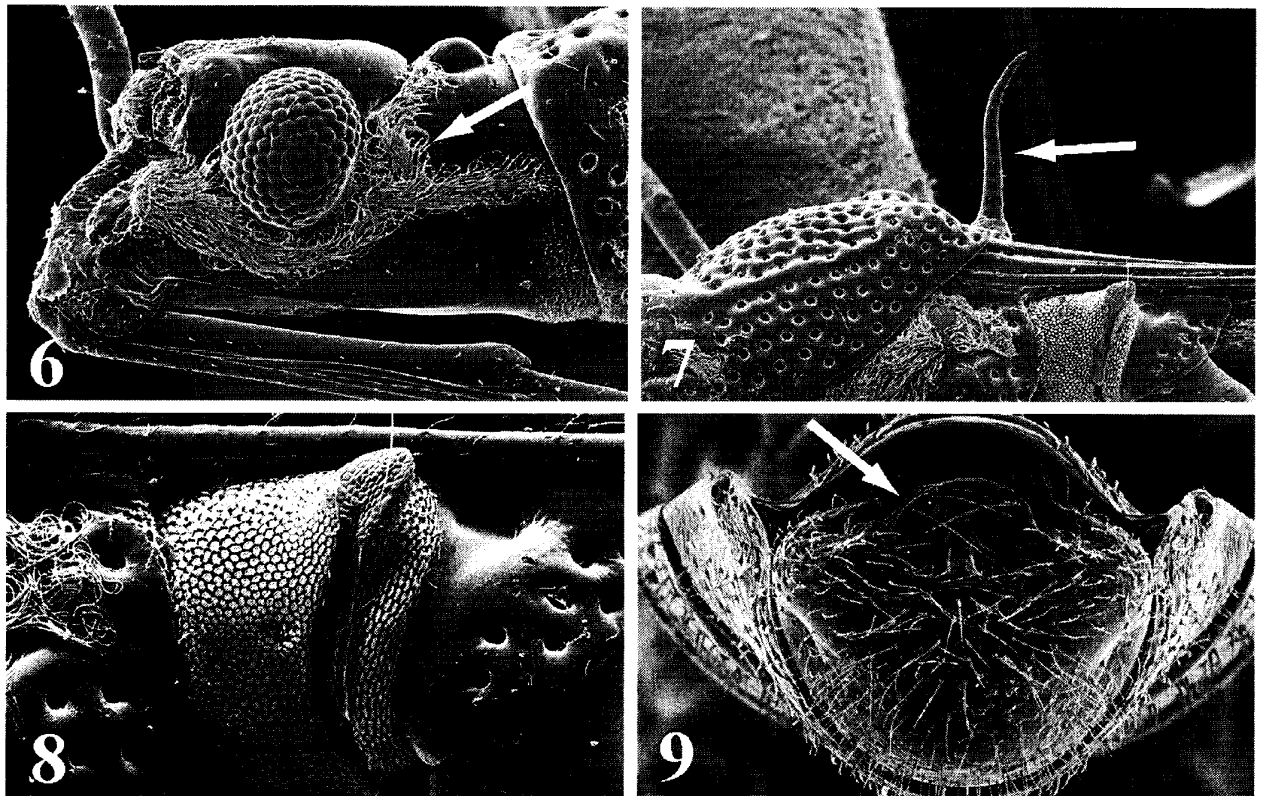


Fig. 5. Adult dorsal habitus of *Yemmatropis erectus* n. sp., paratype ♂.



Figs 6-9. Scanning electron micrographs of *Yemmatropis erectus* n. sp. 6, head, lateral aspect, arrow indicating complete woolly band (81.3 \times); 7, pronotum, lateral aspect, arrow indicating long, erect scutellar spine (33.3 \times); 8, ostiolar scent channel and evaporative area (133.6 \times); 9, male genital capsule, caudal aspect, arrow indicating position of parameres (109.0 \times).

dark brown spots, some coalescing to form larger spots; tibiae darker brown, with scattered, indistinct dark brown spots; tarsi brown; claws black. Femoral lengths: pro- 3.14–3.20 mm; meso- 3.52–3.65 mm; meta- 5.25–5.44 mm. Tibial lengths: pro- 3.78–3.90 mm; meso- 3.90–4.03 mm; meta- 6.90–7.17 mm. Genital capsule (Fig. 9): V-shaped dorsal notch wide, ca. 0.13 mm across base. Paramere (Fig. 11): fingerlike, apical half relatively thick (compare Fig. 10).

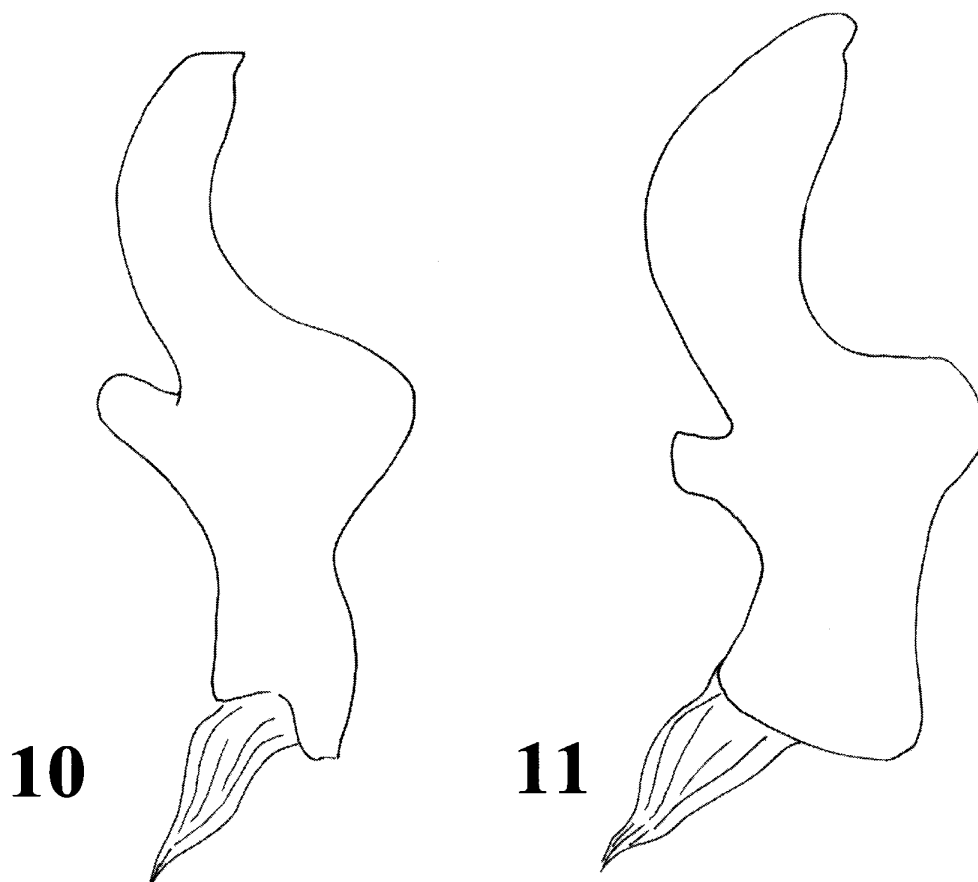
Female (n=5). Length 7.04–7.75 mm, width across hemelytra 0.93–0.96 mm. Head: length 0.78–0.93 mm, width 0.60–0.59 mm, vertex 0.35–0.38 mm. Rostrum: length 2.32–2.43 mm. Antenna: segment I, length 5.31–5.76 mm; II, 2.37–2.62 mm; III 3.20–3.52 mm; IV, 0.98–0.99 mm. Pronotum: length 1.14–1.20 mm, basal width 0.78–0.83 mm. Scutellar spine: length 0.46–0.56 mm. Femoral lengths: pro- 3.07–3.25 mm; meso- 3.26–3.45 mm; meta- 4.93–5.56 mm. Tibial lengths: pro- 3.52–3.75 mm; meso- 3.71–3.95 mm; meta- 6.40–7.23 mm.

Etymology. The specific epithet “*erectus*” (from Latin, meaning upright) is used to denote the long, erect scutellar spine.

Distribution. Known only from Viet Nam.

Host. Unknown.

Type material. Holotype: ♂, Viet Nam: Mt. Lang Bian, 1500–2000 m., 19.V–8.VI.1961, N. R. Spencer collector BISHOP (BPBM). Paratypes: 7♂♂, 5♀♀, same data



Figs 10–11. Parameres of *Yemmatropis* spp. 10, *Y. dispar* (Hsiao, 1974); 11, *Y. erectus* n. sp.

as for holotype (BPBM; 2♂♂, 2♀♀ USNM).

Acknowledgments

I thank Gordon Nishida (BPBM) for lending nearly all of the material used in this study and Kathleen Schmidt (Hillsdale, New York) for the illustration of *Yemmatropis erectus*. Richard C. Froeschner (USNM), M. G. Pogue (Systematic Entomology Laboratory [SEL], ARS, USDA, c/o USNM), and D. R. Smith (SEL) kindly reviewed the manuscript and offered suggestions for its improvement.

References

- Henry, T. J. 1997a. Cladistic analysis and revision of the stilt bug genera of the world (Heteroptera: Berytidae). *Contributions of the American Entomological Institute* 30 (1): 1–100.
 Henry, T. J. 1997b. Monograph of the stilt bugs, or Berytidae (Heteroptera), of the Western Hemisphere. *Memoirs of the Entomological Society of Washington* (19): 1–149.
 Henry, T. J. and Froeschner, R. C. 1998. Catalog of the stilt bugs, or Berytidae, of the world. (Insecta: Hemiptera: Heteroptera). *Contributions of the American Entomological Insti-*

- tute 30 (4): 1–72.
- Hsiao, T.-Y. 1974. New stilt bugs from China (Hemiptera: Berytidae). *Acta Entomologica Sinica* 17: 55–65.
- Hsiao, T.-Y. 1977. Berytidae. Pp. 281–287, 304–305. *In*: Hsiao, T.-Y. *et al.* (Eds) *A Handbook for the Determination of the Chinese Hemiptera-Heteroptera*. Vol. 1. Science Press, Beijing, 330 pp., 52 pls. [In Chinese with English summary]
- Ren, S.-Z. 1988. Hemiptera: Nabidae, Berytidae, Coreidae. Pp. 111–120. *In*: Huang, F. S. (Ed.) *Insects of Mt. Namjagbarwa Region of Xizang*. Science Press, Beijing. [In Chinese with English summary]
- Štusák, J. M. 1989. Two new and little known Oriental stilt bugs (Heteroptera, Berytidae). *Acta Entomologica Bohemoslovaca* 86: 111–120.